An Occupation in Transition: Traditional and Modern Forms of Commercial Fishing

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Abstract:

This study examines certain changes taking place within the occupational world of commercial fishermen in the United States. An ethnographic description of fishing in Bristol Bay, Alaska is provided. This fishery is regarded as an examplar of "modern" fishing and is shown to contrast sharply with "traditional" fishing. Some of the more critical social and economic features of fishing as an occupation are translated into analytic variables for comparative purposes. Finally, some consequences of observed variations within the occupation are discussed with attention directed toward the prospective future faced by fishermen.

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Fishing as an occupation has, until recently, attracted relatively little attention among social scientists. When fishing has served as a focus of study it has been treated as a "traditional" hunting and gathering activity marked by uncertainty, danger, fraternity, low levels of bureaucratization, high levels of task interdependency, and a distinct local character (e.g., Andersen and Wadel (eds.), 1972; Salaman, 1974; Norr and Norr, 1974; 1978; Pollnac, 1976; Firestone, 1978). Reflecting these features, the social organization of fishing has been described as a community and family based endeavor followed by persons who learn and come to share a set of strong normative expectations regarding what is to be considered proper behavior within a given geographical and temporal location. In this sense, the sociology of fishing has developed as a sociology of fishing communities or societies.[2]

Such an approach has much to recommend it in homogeneous, isolated, and relatively specialized societies or communities. However, the limitations of this approach loom rather large if one is to examine fishing in heterogeneous, urban, and complex settings where fishing represents merely one economic pursuit among many within given territorial boundaries. In such settings, it is useful analytically to define fishing in terms of its occupational attributes and to view fishermen as members of a work community whose boundaries are described in social rather than physical terms.

The phrase "occupational community" is valuable in this regard. We use the phrase to denote a group of people who (1) see themselves in terms of a career title or label; (2) share with their fellow workers a set of values, norms and

ideological perspectives that include work-related matters but extend beyond the work environment; and (3) prefer social associations with work colleagues to those with outsiders.[3] Such occupational communities appear to develop and sustain themselves on the basis of a number of sociological and ecological factors. Some of the more prevalent (pre)conditions associated with occupational communities include: dangerous, extreme or unusual working conditions (e.g., high steel workers, Haas, 1977); rigorous socialization (e.g., policemen, Van Maanen, 1973); marginal status vis-a-vis the society (e.g., jazz musicians, Becker, 1953); highly developed work skills (e.g., craftsmen, Stinchcombe, 1959); social and geographic isolation (e.g., military personnel, Janowitz, 1959); social value of the work (e.g., medical doctors, Millman, 1978); and the inclusivity or restrictive influence the occupation has on non-work activities (e.g., corporate managers, Kanter, 1977).

On the basis of recent research, fishing fits most if not all of the above defining and conditional characteristics associated with the phrase occupational community. For example, fishermen do not see themselves as employees or owners per se, but as fishermen, a category apart from other occupational pursuits (Miller and Van Maanen, forthcoming). Fishermen in any given locale develop relatively elaborate moral codes stressing strong ties among kin, distrust of outsiders, and the important role ritual and ceremony play in everyday life (Goodlad, 1972; Faris, 1972; Gersuny and Poggie, 1974). Social relations among fishing crews -- workmates -- are described across a variety of settings as cohesive, trusting, interdependent, reciprocal, inclusive and equalitarian (Yngvesson, 1976; McGoodwin, 1975; Bartlett, 1977). Fishermen appear to be highly involved in their work which requires not only long, continuous hours of effort but also considerable amounts of time spent away from home and family (Orbach, 1977; Poggie and Gersuny, 1974). Fishing itself is not only routinely dangerous but often takes place under extremely hazardous conditions (Tunstall, 1969; Horobin, 1957). Finally, the tasks of finding, harvesting, and selling fish are highly competitive,

uncertain, strategic, and require a good deal of specialized knowledge (Andersen, 1973; Cove, 1973; Norr and Norr, 1974).

While these descriptive features are sufficient to distinguish most forms of fishing from other occupational pursuits, they fail to reflect (or anticipate) the diversity to be found among fishermen or the contextual and historical character of the occupation as practiced in specific settings on specific occasions. It is this latter issue with which we are most concerned in this paper. In particular, new forms of commercial fishing in the United States are arising. Three general trends are of critical importance when attempting to both describe and account for current fishing patterns.

First, fishing ports are growing far more diverse in almost all respects than in times past. Fishing strategies are changing, ethnic domination of ports are declining, boat designs are varying, new fishermen (and women) are becoming involved in the occupation, and so forth. This is as true for large, complex ports as it is for small, simple ones (Miller, 1979). Second, fishermen are increasingly the target of governmental regulations. The essentially laissez-faire market mechanisms associated with fishing as an economic activity in the U.S. is giving way to quotas, licensing, closures, optimal yield calculations, and various other governmental social control practices designed, in part, to insure the conservation of scarce natural resources and, in part, to promote the financial interests of the industry if not the nation (Johnston, 1976; Terry, 1972; Miller and Van Maanen, 1979b). Third, relatively recent technological innovations have altered certain taken-for-granted features of the occupation. Modern fishing vessels are expensive, electronically and mechanically sophisticated, and far more versatile than their predecessors. Technologically influenced alterations in the various systems of transportation for fish (and fishermen) have greatly expanded the markets (international and domestic) for both fresh and processed fish. Moreover, fisheries and fish movements are receiving considerable scientific attention with the result of improving the various predictive models

applicable to locating and estimating the amounts of certain species of fish (e.g., Alverson, 1972). While it is not obvious how and in what ways these changes have altered fishing practices and organization, it is the case that among fishermen such changes have not gone unnoticed.

The Relevance of an Extreme Case

Our main purpose in this paper is to explore some of the social and economic consequences of the above changes upon fishermen. Specifically, we will argue that the prevalent view of fishing in the United States as shaped by local, tightly organized, and custom-bound occupational communities of fishermen or, in the terms we develop here, "traditional" forms of fishing, is a misleading conception and one that masks more than it reveals. To be sure, there are many traditional fishing communities in the U.S. but a growing number of fishermen, responding to what they believe are promising economic opportunities, are working outside these communities in some very new ways. The social and economic patterns that are emerging outside the traditional context are labeled "modern" forms of fishing. This transition is just beginning to occur and, as a consequence, we have the chance to observe not only the situational conditions and short-term outcomes associated with such change, but we also have the opportunity to add modestly to the general understanding of occupational, organizational, and social change.

As a way of approaching these often slippery topics, we examine changes in the fishing occupation as they appear within the context of the sockeye salmon fishery in Bristol Bay, Alaska -- a fishery particularly responsive to the three trends described earlier and a fishery many fishermen regard as novel, chaotic, and downright frantic.[4] What this look at an atypical and, in most respects, "extreme" fishery documents is the need to alter present conceptions of fishing in order to account for some new and very different patterns of occupational practice and organization. For example, most studies of fishing have been concerned with fishermen who are part of a single fishery based in a permanent home

port. On these grounds alone, Bristol Bay fishermen stand out for they are involved in two or more fisheries and do not, in any way, consider Bristol Bay home. By examining what we label a modern form of fishing, we seek to suggest empirically that what many observers of fishing regard as occupational constants are, in fact, occupational variables.

In the sections to follow we provide, first, an ethnographic description of commercial fishing in Bristol Bay. We regard this fishery as an examplar of modern fishing and thus draw attention primarily to those patterns of fishing in Bristol Bay that contrast sharply to traditional patterns. Second, we translate the more salient social and economic features of occupational life in Bristol Bay into analytic variables such that by assigning qualitative values to these variables we can empirically distinguish traditional from modern forms of fishing. Though not described in detail, the comparative analysis rests on earlier ethnographic work conducted in a most traditional fishery, Gloucester, Massachusetts.[5] Third, some of the social consequences of modern fishing are discussed and a speculative but we believe well-grounded assessment is made of the prospective future faced by many fishermen.

Fishing in Bristol Bay[6]

The Bristol Bay salmon season in southwest Alaska is a breathtaking ecological event, an extremely profitable economic phenomenon, and a charged social scene. Contributing to the annual drama are: (1) a stark and remote setting in tundra Alaska, (2) the world's largest runs of sockeye salmon, and (3) a huge seasonal influx of commercial fishermen and processors. The great majority of fishing effort occurs during a six week period. The remaining ten and one-half months of the year, most Bristol Bay salmon fishermen are engaged in a wide variety of fishing and non-fishing activities thousands of miles away from Bristol Bay. Much of what contributes to the uniqueness of the Bristol Bay fishery is then its geographical, temporal, and social isolation.

Fishing in Bristol Bay is concentrated at the mouths of the Kvichak and

Naknek Rivers. During the salmon season, the towns of Naknek (pop. 318), South Naknek (pop. 154) and King Salmon (pop. 202) boom. More important than these towns to the fishermen however are the seven canneries which dot the sand colored cliffed banks of the Naknek, the large airstrip 17 miles away from the fishing waters, and the recently completed highway connecting the two. Fresh fish can be transported easily along the new road to the airstrip and then shipped by plane to destinations around the world.

Five species of salmon run in sequence during the summer months in Bristol Bay. The first run, beginning usually in late May or early June, is king salmon and attracts only a small number of non-local fishermen. It is not until the middle of June that the sockeye begin to run (the peak days of the run are said to straddle the Fourth of July). It is this run that is of major interest to fishermen. An exodus of fishermen follows the sockeye run, typically the middle of July. For the few that remain, dog, coho, and pink salmon runs extend into early September. Fishing of these species is, however, not particularly profitable and is dependent solely upon the willingness of the canneries to remain in production after the sockeye season (always an uncertain proposition).

Participants

In 1979, 1500 gillnet vessels participated in the fishery. With an average of two persons aboard, some 3000 people competed by boat for sockeye salmon. Additionally, there were some 650 set net operations along the shoreline involving another 1000 or so persons. And, as noted, the vast majority of these fishermen were not year-round residents in Bristol Bay. These fishermen represent a diverse assembly of people hailing from all the western states and far beyond.[7]

Participation in this migratory stream is both historically and ethnically specific. The present ethnic composition of fishermen reflects successive migratory waves of various ethnic groups since the turn of the century. For example, prior to World War II, a large percentage of Bristol Bay fishermen were Scandanavian and were from Seattle. The years following World War II saw an influx of Italian

fishermen many of whom had finished previously in both California and Italy. This period also brought Slav fishermen to Bristol Bay. The sixties marked the penetration of Croatian fishermen whose numbers grew steadily throughout the decade. The entrance of the "ethnically unaffiliated" fishermen took place in the seventies. Fishermen falling into this category are referred to by other fishermen in a variety of ways, not all of which are complimentary (e.g., "newcomers," "part-timers," "greenhorns," "professionals," etc.). Finally, there have always been "local fishermen" in Bristol Bay. Within the categorical lexicon of the area, this group is sub-divided (though not without ambiguity) into Native American (Eskimos, Aleuts, and Athabascans) and caucasians or "whites." Fishermen familiar with Bristol Bay's past contend that "local fishermen" used to be thought of merely as residents of Alaska but this is now changing and becoming denotatively more narrow and connotatively more nuanced.

Of critical importance however is the fact that these groups have not replaced one another over time in a serial fashion but have added to one another in an accumulative fashion. All of the above groupings are to be found at work during the salmon season in Bristol Bay. Moreover, each group represents a different occupational community of fishermen -- with different standards, strategies, and social relations.[8] There are virtually no overlapping crews. Members of an ethnic group, for example, fish only with other members of this group (in many cases, only with kin). Most, if not all, arrangements for crew composition are then made before fishermen arrive in Alaska. Bristol Bay is not a place to find a position on a fishing boat.

Fishermen arrive by air or boat in Bristol Bay and fit into the local order in several ways beyond that pre-established by crew composition. One method is to reestablish ethnic or home-port ties. Fishermen from as far away as Sicily and Norway, for example, are reunited annually in Bristol Bay with relatives and past fishing partners. Other fishermen, particularly those without strong ethnic or home-port ties, constitute an "oldtimers" network based upon the shared

experiences of having fished Bristol Bay for many years. One growing but problematic participant in Bristol Bay is the "newcomer" who does not quite fit into any of the recognized groupings. These fishermen, though perhaps quite experienced elsewhere, are uninitiated into the vagaries of Bristol Bay and are unfamiliar with the cultural understandings of various groups of fishermen use to regulate their fishing activities (Miller and Van Maanen, 1979a). Their reliance on other fishermen for fishing-related information is substantial and to provide (or to be asked to provide) such information is annoying to many fishermen. Though newcomers may have rules of their own as to how one is to fish, they have not yet been exposed to Bristol Bay and have difficulty making sense out of the bewildering variety of cultural rules, practices, and styles at play in the fishery. It is in this sense that the Bristol Bay fishery cannot be seen as a single occupational community; it is better viewed as an assembly (something like a convention) of contrasting occupational communities of fishermen.

To many fishermen in Bristol Bay, working alongside strange groupings of fishermen who fish and behave in vastly different ways is unsettling. Fishermen have thus far adapted to the situation by developing stereotypic models for one another. Functionally, this serves to reduce uncertainty and perhaps minimize inter-group conflict by allowing fishermen to categorize "odd" occupational conduct in terms of attributed ethnic or social differences.

> "Italian fishermen, ya know, they all fish together in packs and come up from California. You can always hear 'm over the radio saying things like 'Where'd Dad go?' or 'Have you seen Uncle Sal?' The one's from Pittsburg (California) always fish next to each other in a tight little cluster...I keep my distance."

Social distance among fishermen is also sustained by work habits. In general, there are few non-working hours for Bristol Bay fishermen. It is common for a fisherman to work for twenty or more hours straight and then rest for four. Other patterns exist of course but what is consistent across fishermen

are the long, consecutive, and instrumentally focused hours put in on the job. There is very little if any time allocated by design for leisure or informal socialization. The salmon season in Bristol Bay represents, to adjust Goffman's (1961) famous phrase, a "total work institution."

> "If I'm not fishing, I'm delivering fish. I'll use an alarm and sleep for fifteen minutes while I'm drifting and my net is out. It's a full month without sleep up here...this is what separates the highliners (top earning boats) from the rest of them. You only stop to sleep when you can't take it anymore. Some guys sleep every night. Those are the guys who come up to play, not work. One guy I know is always depressed about how he does but he always sleeps six to eight hours a night."

This emphasis on economic performance leaves little time for social interaction to develop among fishermen on different boats. In fact, most communication between fishermen who are not members of the same crew occurs over the radio instead of face-to-face. In this light, it is hardly surprising that stereotypes of other occupational communities provide a fisherman with his greatest source of information about the social composition and working styles of others in the fishery.

Fishery Organization:

Several institutional mechanisms restrict and limit the migratory participation of fishermen in Bristol Bay. The first mechanism is recent, more or less public, and consists of various legal statues and enforcement practices. The second mechanism is historical, private, and concerns the notion of "cannery affiliation." We consider the regulatory rule of government first.

Efforts to officially manage fish stocks, fisheries, and fishermen in the United States have taken four forms: limited entry, restricted capacity or efficiency, limited seasons, and the establishment of quotas. In many respects, Bristol Bay represents one of the most, if not the most, heavily regulated U.S. fishery. For example, the Alaskan Department of Fish and Game (ADF&G) excludes from Bristol Bay all other forms of salmon fishing except the use of set or

drift gillnets. Boat lengths are limited to 32 feet. Catches must be processed within certain deadlines. There are closed waters and strictly bounded fishing periods. Of the four governmental strategies of fishery management, all are utilized in Bristol Bay. Policing is also stringent and violations, if discovered, are dealt with severely. While all fisheries in the country are subject to increasing regulation, few compare with Bristol Bay in terms of the effectiveness with which such regulations can be enforced so congregated, restricted and easily monitored are the areas of fishing and landing.

Such regulations do more of course than simply manage the fishery in anticipated and steady ways. Consider, for instance, the influential role the policy of "limited entry" has had in shaping the fishery. Instituted in the early 1970s, entry permits were given to captains of Bristol Bay boats fishing during those years. Subsequently, permits could be obtained in only one of two ways: permits could be purchased on the open market or permits could be earned through a point system developed by the ASF&G. In practice, buying a permit is now the only way to gain access to the fishery since to generate enough points to qualify for a permit would require a fisherman to have spent years fishing for salmon in the region prior to the introduction of the regulatory statue. In March of 1977, with an uncertain season ahead, the price of a permit was roughly five thousand dollars; in March of 1980, with a banner year predicted, the price of a permit is minimally one hundred thousand dollars and rising. Since there are buyers, the range of capital investment represented by the boat owners involved in the fishery is, by comparison to other fisheries, enormous.[9]

Aside from governmental control practices, the canneries of the region also play a central role in regulating fishing in Bristol Bay. As one fisherman remarked: "Just because you have a permit doesn't mean you have a market." The notion of "cannery affiliation" is particularly important in this regard.

Affiliation with a cannery is significant to fishermen because canneries supply him with a guaranteed buyer for his catch, with seasonal stores, with parts, services and fishing equipment, with occasional (or seasonal) room and board, and, in many cases, with off-season boat storage.

Historically, the geographic isolation of Bristol Bay has limited the number and kind of fish processing firms. Because of the large capital investment required to operate in the region, the canneries that emerged and survived were few in number but particularly powerful (Crutchfield and Pontecorvo, 1969). This power was most visible in terms of the asymmetric relationship existing between cannery and fishermen. Prior to World War II, the canneries controlled all the factors of production in the area and fishermen were paid on a percentage of catch basis. In brief, the fishermen were employees of the canneries who owned the boats, the equipment, the supplies, and, some would say, the captains.

There are now few cannery-owned boats in Bristol Bay and cannery ownership of production factors has, in general, declined. Accounts for this shift vary but four reasons are given most credence by fishermen: the increased cost of maintaining power (as opposed to sail) fishing boats -- particularly as cannery boats aged; the decreased isolation of the area as a result of improved methods of transportation; the organization of fishermen into strong cooperative units; and the entry of "cash buyers" (fish dealers without processing capacity) into the area.

These are relative changes however and while the relationships among canneries and fishermen have become more reciprocal of late, the canneries still shape and control a great deal of the fishing activity in Bristol Bay. For example, canneries put restrictions on the number of pounds of fish a boat can deliver to tenders. Canneries also set and restrict the length of fishing periods beyond that of state law by virtue of their decisions about when to open and shut down operations. Moreover, canneries can and do use their "affiliation" leverage with

fishermen to increase production. A year-by-year account of a captain's mean catch is filed with various company records relating to specific fishermen. Any significant decrease in terms of the previous year's catch may well mean the captain's expulsion from the cannery. To the cannery, a decrease without obvious explanation (e.g., engine trouble, sickness, etc.) can mean only that the captain is unproductive or is dealing with a cash buyer and is therefore not honoring the affiliation contract which requires exclusive exchange.

Canneries also control the primary social institution of Briston Bay, the fish camp. In addition to handling the catch, boats, and processing associated with fishing, fish camps provide room and board for some fishermen during the season and, of equal if not more importance because of the transportation costs involved in getting a boat to and from Bristol Bay, provide storage for boats during the off-season. Fishermen who do not live aboard their boats while in Bristol Bay live in bunkhouses supplied by the canneries. Rooms are assigned to boats with captain and crew sharing rooms. This further reinforces the crew as a social unit and, through the practice of assigning certain "types" of fishermen to specific bunkhouses, canneries also promote the segregation of fishermen into larger identifiable networks based primarily upon ethnicity.

In most respects, canneries (and the fish camps associated with them) are self-sufficient micro-communities within the local area. They are supplied with goods shipped in from outside the region and deal with few, if any, local businesses. Correspondingly, fishermen themselves have little interaction with or interest in the Bristol Bay community. Only an occasional visit to one of three local bars or the one irregular movie house may interrupt what is otherwise an encompassing activity schedule organized by fishermen primarily around their work and only secondarily around whatever social life is immediately available in the fish camp (e.g., mess hall meals; talk, cardplaying, drinking in the bunkhouse; reading; sleeping).[10]

Though the canneries are of undeniable importance to the social and economic

life of Bristol Bay, the successful organization of a fisherman's collective bargaining group (the AIFMA, Alaskan Independent Fishermen's Marketing Association) has enabled fishermen to challenge the economic dominance enjoyed by the canneries of the region. This association, in essence, a local fishermen's union, has brought together owner-captains of the majority of boats in Bristol Bay (and indirectly the crew members of boats since crew members are all paid on a share-of-earnings basis) to collectively negotiate, prior to the start of the season, the price to be paid by the canneries for the salmon catch.

The strength of this association is unique compared to other U.S. fisheries where contracts between fish processors (buyers) and fishermen are typically negotiated individually and are therefore highly variable across specific relations and encounters. Some indication of the AIFMA's influence is reflected by the 5-day "strike" called by the association at the beginning of the 1979 season -- a comparatively rare event throughout the history of American fishing.[11] Without an agreed upon price settlement in hand, individual fishermen were forbidden by the association to fish and those few who did were forced to leave the association. One fisherman remarked:

> "They were mostly newcomer's working for one cannery. We called them scabs....Some fishermen threw firecrackers and eggs and some wanted to shoot them. But the association didn't condone that kind of action."

Complicating the contractual relations between Association members and the canneries is the previously mentioned presence of the cash buyer. Relations between the fishermen and cash buyers tend to be informal, specific to a given transaction, and expressed in terms of verbal negotiation and agreement -- though cash buyers on occasion do publically advertise their offers. The principle advantage for fishermen of dealing with cash buyers is price -- cash buyers pay more. Yet, disadvantages are numerous, so numerous in fact that cash buyers have not seriously disruptive cannery arrangements with fishermen in Bristol Bay.

Specifically, cash buyers are seen by fishermen as less reliable than canneries. Several cash buyers, for example, went bankrupt in 1979 leaving fishermen with worthless checks. Nor do cash buyers provide extra services for fishermen such as year-round storage of boats, repair facilities, mechanical expertise, supply stores, and so forth. More to the point, cash buyers do not, as canneries do, guarantee a fisherman a market for his fish.

The 1979 Season:

By all accounts, the 1979 salmon season in Bristol Bay was one of the most unusual on record. Never had new entrants paid so much to become involved, never had prices been so high, rarely had the sockeye run been so bountiful. The season did have its ironies and peculiarities however and it is within this concrete context that the above portrait of Bristol Bay must be viewed.

Three interrelated phenomena stand out when describing the 1979 season. First, as one observer on the scene put it:

> "The season was marked by good fishing and poor processing. It was fun to watch the fish hit the net and explode out the other side. But it was depressing seeing the obstacles coming in."

In the height of the season it took less than one half hour to fill a boat with fish, four to six hours to separate salmon from the gillnet, and ten to twenty or more hours to unload the catch as a result of exceedingly congested tender lines. Fishermen would, as one journalist suggested, make a frantic Le Mans start when going out to fish, quickly fill their holds, and then literally race to the tenders only to face a long, tedious, and thoroughly disliked period of making constant minor adjustments in the lines binding a boat to others in the unloading queue.

The image of hunt, pursue and trap which accurately surrounds the uncertainties involved in most fishing ventures simply does not fit the reality of Bristol Bay. The Bristol Bay fishery is based on an ecological regularity -- the annual return of a more or less predictable number of salmon. Though 1979 was an extreme

case, it is generally true that in Bristol Bay fish do not have to be located, only harvested. In fact, during the heaviest part of the runs, the greatest danger fishermen face is that their gillnets will become so overloaded with intercepted fish that their boats will capsize and be pulled under by bloated nets.

The fact that processors could not keep pace with the fishermen who could not keep pace with the sockeye led to the second phenomenon of interest associated with the 1979 season, waste. Fishermen unable to unload their catch within the state and cannery instituted time restrictions which operationally define the concept of marketable (fresh) fish, were compelled to jetson their entire catch. The scene was described painfully by one fisherman:

> "I saw tide rips ten to fifteen miles long full of salmon floating on thir sides. We called them grey ghosts and sidestrokers."

In some cases however fish were landed, processed, and exported to Japan and Europe only to be rejected by buyers as spoiled. As a result, the international reputation of Bristol Bay fish fell as did demand. Moreover, the domestic reputation of Bristol Bay salmon was damaged when the U.S. Food and Drug Administration withdrew a substantial portion of Alaskan salmon available for public consumption. While there exists no one agreed upon cause for this lack of quality control, both fishermen and processors alike have been faulted. Consider one view:

> "There has always been a lot of sloppy practices. I mean, my God, man, they put a lot of those salmon on dry scows and no ice out there in the bright sun and let them sit for a day or two before they start to process them. What's the good for me to deliver to the scows when it just sits there for two days and bakes in the sun."
>
> (fisherman)

and another,

> "There was absolutely no respect for the fish. It was treated horribly because everybody knew it didn't make any difference. Who gives a shit whether the scales are off. It's going to go into a can and get cooked."
>
> (processor)

In spite of these peculiarities, the 1979 season was, in almost every respect, an extremely lucrative one for all Bristol Bay fishermen (and the 1980 season is predicted to be even more profitable).[12] This prompts our third observation: the discomforting problems associated with the 1979 season were viewed by fishermen as unfortunate to be sure, but, overall, these problems were taken rather lightly and viewed as merely slight inconveniences or minor operational issues. In light of the potential (and realized) economic rewards, fishermen demonstrated that they were able to tolerate great ethnic and working style diversity, to band together and negotiate with canneries as a collective unit, to manage without disruption the presence of cash buyers (some with dubious reputations), to embrace a stern work-only existence governed by contract, to live in not-so-splendid isolation thousands of miles from home for an extended period of time, and to more or less overlook poor processing, considerable waste, and a great deal of external regulation. The point to be made here is simply that individually and collectively these working conditions would be regarded as loathsome if not inconceivable by most fishermen unfamiliar with Bristol Bay.

In sum, Bristol Bay seems in no immediate danger of either vanishing or of becoming a "traditional" fishery worked only by resident (or near-resident) fishermen. What it will become is less certain though it does seem assured that fishermen, like the salmon they intend to catch, will continue to migrate seasonally and, in the process, continue to refine and create new forms of fishing organization. It is in this sense that Bristol Bay can be seen as transforming the occupation in particular ways and can therefore be regarded, for the moment at least, as a "modern" fishery.

The Traditional and Modern in Fishing

In this section, we make explicit and formal certain dimensions of contrast which discriminate between two contemporary forms of commercial fishing, the traditional and the modern. The contrasts we draw are idealized ones and are

presented not only as distinct but as if traditional and modern forms of fishing were mutually exclusive. This is of course a distortion for the distinctions made below are not only interrelated empirically to one another but are, in any given fishery, mixed in various ways across the two idealized types. By choosing an extreme form of modern fishing for comparison to the traditional form, however, the variables are patterned in maximally divergent ways thus serving make visible what might otherwise be obscured were another base of comparison chosen.

Table 1 presents the dimensions of contrast between traditional and modern fisheries with respect to the social and economic categories of interest highlighted in the previous section. As can be seen, on these dimensions, whatever modern fishing is, traditional fishing is not. In essence, Table 1 represents what we believe to be the most important distinctions to be made across fisheries within the contemporary context of commercial fishing in the United States. An analysis is presented below but it is an abbreviated one; in part, because it is meant to be suggestive and illustrative, not absolute; and, in part, because it remains an open empirical question as to the extent to which the variables used here represent an exhaustive and researchable set.

(INSERT TABLE 1 ABOUT HERE)

Several remarks are now in order. First, we do not claim there are deterministic links -- in any direction -- between the economic and social categories displayed in Table 1. Each category represents merely an arbitrary but convenient means for organizing particular descriptive variables. However, we do claim an empirical and, in the reciprocal sense, causal connection among the qualitative values displayed for each variable as they appear under a common (column) heading. A brief justification and elaboration for our ordering and assignment of values follows. Second, Table 1 displays only the variables that distinguish modern from traditional fishing. As noted before, many characteristics of fishing do not contrast -- fishing is physically dangerous no matter what form it takes,

it is a competitive enterprise in any U.S. commercial port, fishermen, regardless where they are located, greatly value autonomy and their corresponding social identity as independent and rugged individualists, relations among crew members are typically cohesive and marked by mutual regard, and so on. Beneath this common and undifferentiated exterior however are a number of crucial and highly variable social and economic factors, which, when firmly in place as is currently the case in Bristol Bay, alter if not invert the conventional descriptions, imagery, and accounts of fishing in America.

Social Organization:

Traditional fishing involves participants who share with one another a common (sub)cultural background, one in which the social ties linking fishermen are multiple and diverse. In traditional settings, fishermen share a single ethnic identity and the relationship ties which develop among fishermen (based on religions, kinship, residential, age, education, leisure interests, etc.), are numerous and similar to one another in overall pattern. Modern fishing involves participants who are far more heterogeneous in background. Fishermen in these settings are united by a relatively small number of social ties. Fishermen claims upon and obligations to one another are few in modern fisheries and many in traditional ones. Moreover, outsiders who wish to enter traditional fisheries must first penetrate social barriers for the typical participants in these fisheries have been born into the occupational community and carefully guard its boundaries to include "only our kind of fisherman." Recruits to modern fisheries deal instead with primarily economic prerequisites. Whereas traditional fisheries have a relatively stable number of participants with a small variance over time, modern fisheries vary in size in direct response to market phenomena.

Fishermen in traditional settings, unlike those involved in modern ones, face little social uncertainty since they are familiar in an everyday sense with the variety of other participants with whom they interact over long periods

of time. In such settings, fishermen can relate to their workmates and competitors alike as colleagues and friends. They are able therefore to interpret the actions of others in personalized, though collectively sanctioned, ways. This is not to say that disputes do not arise, indeed they do. But fishermen in traditional settings are accustomed to quarrelling over occupational issues not as representatives of different occupational communities but as individuals within a given occupational community such that disputes and their settlement patterns tend to be localized, situationally specific, and largely private matters.[13]

Modern fishing, on the other hand, involves fishermen who do not share a strong home-port allegiance or a common occupational community. These fishermen routinely rely on cultural stereotypes to order human relations and they tend to deal with competition from other fishermen in antagonistic ways. Within modern settings, fishermen prefer to settle disputes impersonally through a third party if possible since personal solutions in a socially uncertain setting are considered unpredictable and unbounded by common convention. Fishermen locate allies, opponents, and third parties in modern fisheries from a wide range of occupational cultures in addition to those composed of other fishermen. Disputes in modern fisheries are in fact often trans-occupational ones, involving, among others, the judicial, bureaucratic, and scientific communities.

Fishermen involved in traditional fisheries are considerably less mobile, in the social and geographic sense, than those involved in modern settings. Because work and non-work relationships are tightly linked, traditional fishing allows participants to interpret their work experience as an integral component of social life generally. Fishing is not only an occupation but a social position within the community and the perspective that governs ambition in both these areas is one geared toward long-run optimization. Fishermen involved in a modern fishery exhibit an instrumental, short-term, and maximizing perspective.

Fishing is seen as merely a job -- a consequence of rational choice. Whereas in traditional fisheries, there is a low tolerance for occupational and social diversity, modern fisheries promote diversity and thus indirectly sponsor innovation of various types.

Economic Organization:

Fishermen in traditional communities have long-term, personalized, and rather private arrangements with fish buyers. The information flow regarding the specifics of transactions is restricted and access to such information among fishermen is based on social and/or kinship ties. Alternatively information in a modern fishery is typically more open, particularly when fishermen interact with buyers collectively through a fishermen's cooperative or union. Overall, work in a traditional fishery compared to a modern one is marked by less long-term economic uncertainty. Seasons in the traditional fishery come and go and fishermen tend to smooth their economic forecasts (and expenses) knowing that bad years are likely to follow good ones (and vice-versa). Economic arrangements with banks, crew members, and kin are of the extended sort and one poor year is less likely to put a fishermen in a traditional fishery out of business than if he were involved in a modern one. At the same time, the range of capital investments and profit margins in traditional fisheries are considerably smaller than those found in modern fisheries. By and large, fishermen as part of a traditional occupational community are conservative (and enduring) in their work operations. Modern fishing has a speculative cast and an almost boom-or-bust character.

In modern fishing, mobile fishermen utilize a number of ports to transfer fish and are not only inclined to seasonally specialize but are fully prepared to take rapid advantage of an economic opportunity calling for participation in a new area with a new technique. Fishermen who work out of the traditional home port sell their catch on a regular basis to familiar markets. They therefore target their efforts on species that historically have been most available

even if such species are currently of low market value. Fishermen trapped by such circumstances make do with whatever a season offers. Little specialization, economic risk taking, or technological innovation characterize the traditional fishery in the long or the short run.

Finally, traditional fishing is regulated informally through localized cultural and social mechanisms. Modern fisheries, to the contrary, are administered, monitored, and regulated formally according to broad concepts of "societal needs and goals." Recently, however, traditional fishing has been subject to increased state and federal regulation (e.g., the Fishery Conservation and Management Act, the Marine Mammal Act, the Endangered Species Act, etc.). Fishermen in traditional settings are combatative when faced with regulation and are not inclined to participate and legitimize the various decision-making processes put forth by the constellation of outside authorities. Fishermen in modern settings assume a more dispassionate stance, more or less accepting (albeit reluctantly) "bureaucratic adversity" as the price to be paid for the growth and viability of the fishing industry. They therefore protect their occupational investment by learning to interact with cultures of non-fishermen and, as a result, attempt with some success to influence fishery policy.

Comment: The Rationalization of Fishing

By and large, fishing has been viewed almost exclusively as a close knit occupational community of men, boats, and families dwarfed by a massive, inhospitable sea whose secrets are forever locked beneath its surface. Reconciling good and bad luck at sea, fishermen have historically preferred and emphasized folklore, tradition, loyalty, fancied association, superstition, ritual and ceremony, and local autonomy over that offered by science, technology, official regulation, strategic calculation, collective organization, and impersonal selection and decision-making criteria. The so-called call and challenge of the sea has been a prominent theme in the traditional fishing

community (Miller and Van Maanen, forthcoming).

As with any way of life, mystification, duty, and shared ideals of social perfection play supporting roles in maintaining a community of like-minded members. Epitomizing a traditional perspective on fishing, a New England fisherman's remarks are especially relevant in this regard:

> "If I was going out everyday and knew I'd fill my boat with fish, I wouldn't go."

There is mystery here, an attraction beyond the instrumental and computed. Fishing in the modern sense however is less a way of life than it is a rational choice of economic activity. It embodies few traditional attractions and values. In Bristol Bay, there is no Blessing of the Fleet and a fisherman goes fishing precisely because he knows he will fill his nets; were it otherwise, he would quickly pack his gear and leave to ply his trade elsewhere. As we have tried to show, there is little to bind this fisherman to his occupation beyond the principles of economic motivation and exchange.

This is not to suggest that such economic principles to not operate in traditional fishing communities. Indeed they do though they are tempered by established normative and behavioral conventions that stem from the fact that fisherman must live with one another as well as work with one another. Yet, it is nonetheless the case that traditional fisheries are becoming less prominent in the United States and perhaps elsewhere -- both numerically and symbolically. For instance, Spangler (1970: 445-6), after surveying the U.S. fishing industry, reported that its overall character was "composed of numerous small entrepreneurial units, obsolete boats, equipment, and methods, and a high average age of fisherman." Modern fisheries, because they -- among other things -- recruit widely, offer high rates of return, and reward innovation, provide for at least a modest rise of expectations concerning the occupational prospects of fisherman. But, even here, there are some disturbing possibilities that threaten the recent and still uneasy gains made by the new, mobile, and, as of now,

independent fishermen. Three are outstanding.

First, modern fisheries, as is dramatically the case in Bristol Bay, may become even more capital intensive and less labor intensive than current indicators suggest. Evidence for such a trend is already surfacing in the occupation as a whole (Vanderpool, 1979). As a result, individual investment may increasingly give way to corporate investment. A parallel to the logic of industrial growth can be drawn here since systematic, technologically advanced, and wholly non-impressionistic means are now available for locating fish, processing fish, and transporting fish to known markets where returns are more or less predicatable. Moreover, as Terry (1972) suggests, inefficiencies in fishing such as poor processing and waste are largely the results of inexperience and are likely to decline swiftly as participants gain familiarity with a given fish product. Furthermore, when considering strategy, economic rationality suggests that corporations would be quite likely to fish only the peaks of various seasons in quite specialized ways and attempt to keep their boats (and their fishermen-employees) active the year round. Decisions about when or where or what to fish would be more likely to be made by non-fishing corporate managers in Houston, New York, or Los Angeles than by fishermen residing (permanently or temporarily) in any given port.

Second, the boom-or-bust orientation associated currently with modern fisheries may collapse as the long-term consequences of intensive "fishing-out" strategies become known. A number of Atlantic fisheries are already characterized as depleted and, while most Pacific fisheries are presently regarded as abundant, conservation trends can be expected to increase in virtually all regions and ports. The view that fish are a "valued national resource" has become widespread. Thus, short-term, instrumental, exploitation strategies adopted by many fishermen face increasing modification as federal, state, and local regulation becomes more stringent and sophisticated. Contrary to popular opinion, corporate influence on these matters might well be expected to be aimed toward

the support (though qualified) of such regulation as a way of protecting major investments in the harvesting and processing of fish products. Fishermen may then become both more mobile and less independent as the definition of "profitable fisheries" shifts from the short-term to the long-term. Mobile fishermen are currently gaining skills in different kinds of fishing locales, in fishing on a variety of boats with varying gear configurations, in playing different kinds of occupational roles (captain in one fishery, deckhand in another, and engineer in still another, etc.), and in handling more than one species from season to season and year to year. What they are not gaining however is the capital which would allow them to possess an individual stake in, for example, the shrimp season in the Gulf of Mexico, the crab season in the Gulf of Alaska, the tuna season off the coast of California, and the salmon season in Bristol Bay. To participate in such ventures as something more than an employee would require a massive financial investment. On these grounds, more and more fishermen may assume a "career orientation" toward their work wherein the value of obedience and the presumed comforts of economic accumulation replace the value of autonomy and the presumed comforts of social and cultural tradition. Fishermen may become richer but they will pay a price.

Finally, modern fisheries as described in this paper are perhaps best thought of as in transitional, not stable, states. By this we mean merely that by promoting heterogeneity, impersonality, mobility, and an emphasis upon contract, the growth of modern fisheries may hasten the demise of certain traditional fishing communities but the form modern fisheries assume is itself likely to continue to shift. For instance, as rules, practices, and priorities change as seems probable, a gold-rush syndrome may begin to take effect such that only first arrivals continue to reap the full benefits of exploiting a natural resource. If such an effect occurs, recruits to modern fisheries will have neither the warmth and fellowship of traditional fisheries to support them nor the promise of rapid and unlimited return offered by the modern fisheries of

today. Just what these future fishermen of America will do is of course anyone's guess. But, we believe, while fishing is unlikely to beome fully bureaucratized in the Weberian sense, it will become far more rationalized in the corporate and industrial sense and, as a result, fishing will become far less distinct as an occupation among occupations.

Table 1: Contemporary Forms of Commercial Fishing

	Traditional Fishing (e.g., Gloucester, MA)	Modern Fishing (e.g., Bristol Bay, AK)
Social Organization		
Backgrounds of fishermen	Homogenous	Heterogenous
Ties among fishermen	Multiple	Single
Boundaries to entry	Social	Economic
Number of participants	Stable	Variable
Social uncertainty	Low	High
Relations with competitors	Collegial & Individualistic	Antagonistic & Categorical
Relations to port	Permanent with ties to community	Temporary with no local ties
Mobility	Low	High
Relation to fishing	Expressive (fishing as a lifestyle)	Instrumental (fishing as a job)
Orientation to work	Long-term, optimizing (survival)	Short-term, maximizing (get-rich-quick)
Tolerance for diversity	Low	High
Nature of Disputes	Intra-occupational	Trans-occupational
Economic Organization		
Relations of boats to buyers	Personalized (Long-term and informal)	Contractual (short-term and formal)
Information exchange	Restricted and private	Open and (relatively) public
Economic uncertainty (long-term)	Low	High
Capital investment range and profit margins	Small	Large
Rate of innovation	Low	High
Specialization	Low	High
Regulatory and enforcement mechanisms	Informal (few)	Formal (many)
Stance toward outside authority	Combatative	Accepting

NOTES

1. John Van Maanen is a sociologist at the Sloan School of Management, Massachusetts Institute of Technology. Mark L. Miller is an anthropologist at the Institute for Marine Studies, University of Washington. Jeffery C. Johnson is a PhD candidate in the School of Social Science, University of California, Irvine. The authors are indebted to Captain Don Martinson, a Bristol Bay fisherman for 18 years, and his wife Linda, for kind suggestions on this paper, too few of which were followed.

2. Much of the work on fishing societies of communities takes seriously the aims of the population ecology school developed at the University of Chicago: To discover and explain how given populations are territorially organized and encapsulated in the soil they occupy (Park, 1963:33; Hollingshead, 1946: 68-9). Most studies in the area have been concerned therefore with the social processes and structures associated with the way a given population makes use of technology and human organization to sustain itself (e.g., Firth, 1966; Fraser, 1966; Faris, 1972; Pollnac, 1974). For a good overview of what one researcher calls "marine sociology," see Vanderpool, 1979.

3. See Hughes (1958), Lockwood (1966), and Salaman (1974) for an extensive consideration of the notion of an occupational community. Historically, the concept plays off Tönnies (1955) proposed form of Gemeinschaft social relations within which people are linked to one another by multiple shared bonds and common concerns (e.g., neighborhood, kinship, friendship, occupation, etc.).

4. Some mention should be made of the term "fishery" for it has been used by fishermen (and observers of fishermen) in ambiguous and confusing ways. For example, it has been used to denote fish resources and their characteristics (e.g., species, stocks, age-grades, etc.); to denote the geographic location of fish and/or fishermen; to denote specific ports and/or fleets of fishing boats; to denote the existing or anticipated level of fishing efforts in a given locale or across locales; and to denote the social and occupational relationships within a segment of the fishing industry. In this paper however we restrict our use to the geographic or species-specific sense of the term.

5. The ethnographic materials which describe fishing in Gloucester are located in Miller, 1978; Miller and Pollnac, 1978; Miller and Van Maanen, 1979a,b; forthcoming. For more general portraits of this most traditional of fishing communities, see Connolly, 1940; Haberland, 1976; Boeri and Gibson, 1976; and Bartlett, 1977.

6. This description of Bristol Bay is based upon ethnographic fieldwork conducted by Jeffrey Johnson during the 1979 season. While a working resident (ship's carpenter, tender worker, and cannery bookkeeper) in Bristol Bay, Johnson's principle data-gathering techniques were those of the cultural anthropologist: participant-observation and the extended interviewing of key informants. Additional data were gathered through archival sources - newspapers, various fishing-related publications, and library materials.

7. In some respects, Bristol Bay salmon fishermen represent an industrial and urban society's equivalent to a pastoral and rural society's "transhumant" segments of the population. The term, in its most general sense, reflects

simply the seasonal movement of a human population from one ecological zone to another (Barth, 1961; Gomez-Ibamez, 1977; Hardesty, 1977). Transhumant populations maintain permanent residences on a cyclical basis as a settlement pattern in contrast to the nomadic pattern of sequentially abandoning residences. Though there are surface similarities, Bristol Bay fishermen differ from the original anthropological classification in several rather crucial ways: they migrate singly or in small groups; they are heavily dependent upon relatively sophisticated technology (airplanes, communication systems, helicopters, forecasting models, sonar systems, etc.); they represent a very differentiated population in terms of social and ethnic characteristics; they are highly competitive internally; they do not bring with them their supportive social institutions such as the family; and, as noted in the text, they never consider the migratory site "home." See Johnson, 1979.

8. This pattern is quite unusual in the majority of U.S. fisheries (large and small) where a single ethnic background tends to be represented among most resident fishermen. Social organization in these fisheries reflects intra-ethnic distinctions made by fishermen such as the length of time a given fisherman and his family have been a part of the local fishing community. In Bristol Bay, inter-ethnic distinctions are crucial. On these matters, see, Miller (1979) and Miller and Van Maanen (forthcoming).

9. Capital investments may include far more for a fisherman than the cost of an entry permit. New vessels, for example, can range in cost from $50,000 to $150,000 depending on the type of materials used. For older boats brought to Bristol Bay to participate in the salmon season there may be expensive conversions to be made and the transport costs themselves are not insignificant (a minimum, from Seattle, of about $5,000). Sophisticated electronic equipment, while optional, is becoming almost de rigueur on most boats. Add to these more or less fixed costs the variable seasonal costs of fuel, repairs, and stores, and the economic barriers to entry in Bristol Bay do not appear modest. It is the case however that many participants became involved in the fishery years ago when entry costs were relatively low and also the fact that even today some participants manage to fish on a very low budget.

10. By and large, few fishermen take part in whatever recreation is to be found in the fish camps. Most fishermen remain aloof and distant from fish camp life which involves, for the most part, non-fishing cannery workers - fish processors, tenders, service workers, mechanics, carpenters, and so forth. A good, nominally fictional treatment of this venerable Alaskan institution can be found in McCloskey, 1979.

11. A more violent strike, involving some shooting incidents, occured in Bristol Bay in 1969. The fishery has a past enlivened by the presence of some relatively strong fishermen associations which have given collective voice to individually expressed feelings of distrust, resentment and anger aimed at cannery practices. Fishermen in other areas have had little success of late in organizing. In Gloucester, for example, the last reasonably strong fisherman's association peaked and dissolved during the late 1930s and early 1940s. Much of this lack of success is of course due to the tradition of fishing independently and the fact that fishing is currently organized in the U.S. by small, autonomous units (boats) who compete with other units.

12. Some fishermen reported making as much as $10,000 per day - though this cannot be considered an average. It is less clear how the canneries did during 1979. At least one cannery claims to have lost money and it appears as if the canneries as a group will in the future strongly resist the kind of preseason agreement on the price of salmon that was negotiated with the AIFMA prior to the 1979 season.

13. This may be changing slightly in many traditional fisheries with the advent of the Fisheries Conservation and Management Act (1976). This complicated piece of federal legislation created eight Regional Fishery Management Councils to oversee and regulate fishing practices in the U.S. Among other outcomes, one result has been to redirect toward the regional governing bodies some of the attention fishermen formerly reserved for one another in local disputes. If it can be said that groups pull together when faced with a commonly perceived external enemy, the councils then seem to be amplifying such dynamics in several regions. On the federal management of fisheries, see Miller and Van Maanen, 1979b.

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